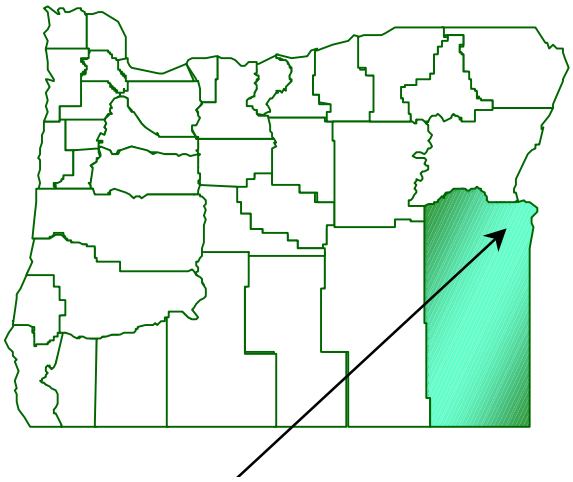
Phase II Brownfield Assessment of the Former Nyssa Landfill, Nyssa, Oregon

Site Overview and Project Background

The former Nyssa Landfill is part of a 13-acre parcel owned by the City of Nyssa. The Landfill is located in eastern Oregon, approximately 1.75 miles north of the town of Nyssa, and about 0.75 mile west of the Snake River (see adjacent map). Municipal landfilling began sometime in the 1960s and ended in about 1972; the property has been vacant ever since.



FORMER NYSSA LANDFILL
City of Nyssa
Malheur County, Oregon
DEQ Eastern Region

In November 1996, the City of Nyssa requested a *Targeted Brownfield Assessment* (TBA) at the site. (Brownfield sites are vacant or underused commercial/industrial properties with known or perceived contamination that has affected their sale or redevelopment.) With funding from U.S. EPA Region 10, the Oregon Department of Environmental Quality (DEQ) conducted the TBA to assist Nyssa's planning for eventual site redevelopment. Soil samples taken as part of the TBA contained low levels of pesticides, lead, and semivolatile organic compounds (SVOCs). DEQ's June 1997 TBA report recommended proper closure of the landfill (including a soil cap); delineation of organochlorine pesticides in soil; and investigation of possible groundwater contamination.

In late 1999, the City of Nyssa again contacted DEQ, requesting a "Phase II" TBA to complete the actions DEQ had recommended in its 1997 report. The city desired to use the site for bio-solid applications, well into the 21st century, and needed DEQ to determine whether contamination at the landfill could either prevent the site from being used in this manner or pose long-term impacts to human health or the environment. As with the 1997 investigation, DEQ conducted the Phase II TBA at no cost to the City of Nyssa, using funds from EPA Region 10.

What We Did

The objectives of the TBA were to: 1) delineate the horizontal and vertical extent of soil contamination; 2) investigate groundwater conditions; and 3) determine what further actions, if any, the city might need to take to be able to use the site for bio-solids application. In consultation with the City of Nyssa, DEQ developed a work plan to achieve these objectives. During field work in March 2000, DEQ and its subcontractor installed five soil borings and three groundwater monitoring wells, and an EPA-contracted lab analyzed the samples for pesticides, SVOCs, metals, and polychlorinated biphenyls (PCBs). In addition, DEQ examined all the

pathways by which contamination, if present in groundwater, surface water, or soil, could affect local residents or environmental receptors.

What We Found

SVOCs and pesticides found in all soil samples were below levels of concern, based on strict residential cleanup standards. Metals and PCBs detected in soil were also below residential cleanup standards, except for two samples containing beryllium and one containing PCBs. Levels of these compounds were slightly above residential standards but still below the industrial standards that apply to the site's projected future use. Groundwater samples contained no pesticides, SVOCs, or PCBs. Groundwater samples did contain a variety of metals at low levels; only lead and barium in several samples exceeded federal drinking water standards.

Regarding pathways of potential exposure, DEQ determined that low levels of metals in shallow groundwater could not reach regional drinking water wells. Limited runoff from the site (due to the arid climate) and the ¾-mile distance to the Snake River ruled out the surface water pathway as a concern. Finally, DEQ concluded that trespassers could come into contact with contaminated soil, and that wind gusts might carry potentially contaminated soil particles off-site, but that the risk of persons inhaling such dust in an off-site location was low, because soil contamination was found in only a few small areas, and only at slightly elevated levels.

The Next Steps

The City of Nyssa proposed to cap the former landfilled area before depositing bio-solids at the site, and DEQ endorsed this action, as a way to prevent any direct-contact or dust-inhalation hazards. EPA will transferr ownership of the monitoring wells installed for this project to the city for potential use during the period of bio-solids application. DEQ also recommended the analysis of groundwater from any new water well that the city might install at the site, for contaminants documented during the Phase I and II TBAs. Otherwise, based on DEQ's evaluation of analytical data, on local environmental factors, and on the exposure conditions summarized above, DEQ determined that no additional actions were necessary to protect human health and the environment.

For more information, please contact:

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